

Supplemental Table
IARC-Classified Agents Selected for Review

Agent	Date and results of last IARC monograph review	Industrial uses and occupational and environmental exposure circumstances and trends
Acetaldehyde (IARC 1999a)	Monograph 71 (1999) Human: Inadequate Animal: Sufficient Overall: 2B	Primarily used as an intermediate in the manufacturing of acetic acid, flavorings, aniline dyes, plastics and synthetic rubber, in some fuel compounds and in the manufacture of numerous other products. Ubiquitous air and water pollutant. Endogenous metabolite produced from ethanol.
Atrazine (IARC 1999b)	Monograph 73 (1999) Human: Inadequate Animal: Sufficient Overall: 3	Widely used herbicide. Applicators occupationally exposed, general populations exposed through drift and in surface and ground water.
Carbon black (Baan et al. 2006)	Monograph 93 (2006) Human: Inadequate Animal: Sufficient Overall: 2B	About 90% of carbon black is used in rubber products, predominantly in tires. Carbon black is also used pigment in inks, paints, coatings and plastics. Worldwide production capacity in 2005 was approximately 10 million tons.
Chloroform (IARC 1999b)	Monograph 73 (1999) Human: Inadequate Animal: Sufficient Overall: 2B	Trihalomethane (THM) chloroform in drinking water. Chloroform is a predominant disinfection by-product (DBP).
Cobalt metal with tungsten carbide (IARC 2006)	Monograph 86 (2006) Human: Limited Animal: Sufficient Overall: 2A	Cobalt metal is added to tungsten carbide, to prepare hard metals for tools. Occupational exposure during refining, in the production of alloys, manufacture of hard-metal tools and during the use of diamond-cobalt tools. Use of cobalt with tungsten carbide in nanoparticle size range is increasing.
Dichloromethane (DCM) (IARC 1999a)	Monograph 71 (1999) Human: Inadequate Animal: Sufficient Overall: 2B	Solvent in furniture stripping and automobile body repair shops. Use (1998) in U.S., Europe, Japan: 506,000 tons.

Diesel engine exhaust (IARC 1989)	Monograph 46 (1989) Human: Limited Animal: Sufficient Overall: 2A	Estimated occupational exposure: 1.4 million in the U.S. and 3 million in the EU especially among miners, professional drivers, railroad workers, vehicle mechanics, heavy equipment operators, dockworkers, tunnel workers, firefighters, farmers and shipping engineers. Occupational exposure is common throughout the world and environmental exposures are ubiquitous in urban areas. Increasing use of biodiesel not assessed for carcinogenicity.
Di-2-ethylhexyl phthalate (DEHP) (IARC 2000)	Monograph 77 (2000) Human: Inadequate Animal: Sufficient Overall: 3	Plasticizer in flexible vinyl products (1 to 40% w/w). Biomarkers significantly increased in DEHP-exposed workers compared to the general population. Two sensitive and specific exposure biomarkers: MEHP and mono(2-ethyl-5-carboxypentyl) phthalate
Formaldehyde (IARC 2006c)	Monograph 88 (2006) Human: Sufficient Animal: Sufficient Overall: 1	Used in pressed-wood products, such as particleboard, plywood, and fiberboard; glues and adhesives; permanent-press fabrics; paper product coatings; and certain insulation materials; and as an industrial fungicide, germicide, disinfectant, and preservative in mortuaries and medical laboratories. Occupational exposure in production, laboratory technicians, health care professionals, and mortuary employees. Ubiquitous indoor and outdoor air pollutant due mainly to off-gassing from building materials.
Indium phosphide (IARC 2006a)	Monograph 86 (2006) Human: Inadequate Animal: Sufficient Overall: 2A	Used in the microelectronics industry; produced as high-purity, single crystals cut into wafers and other shapes. Although only indium phosphide was evaluated in the Monograph, use of other indium compounds including indium tin oxide (ITO) and indium arsenide has increased, with over 70% of indium now used as ITO in flat panel displays.

Lead and lead compounds (IARC 2006b)	Monograph 87 (2006) Human: Limited Animal: Sufficient Overall: 2A	Used in batteries (primary), construction materials, and lead-based chemicals. Occupational exposure during mining, primary and secondary smelting, production of lead-acid batteries, pigment production, construction and demolition. Environmental exposures from contaminated air, dust, water, soil and food are declining due to elimination of leaded gasoline.
Polychlorinated biphenyls (PCB) (IARC 1987)	Monograph 18 supplement 7 (1987) Human: Limited Animal: Sufficient Overall: 2A	Widely used 1930-80. Estimated total production: ~1.3 mill.tons. Exposure: fluids from leaking transformers and capacitors, emissions from sewage, landfills, sludge applied to land, combustion of contaminated material, volatilization from paint and other building materials, accumulation in food, dust from building demolition.
Propylene oxide (IARC 1994)	Monograph 60 (1994) Human: Inadequate Animal: Sufficient Overall: 2B	Chemical intermediate for glycols and glycol ethers (primarily), and hydroxypropyl starch ethers, fumigant, food additive, paint, automotive fluids. Exposure during production of PO and its derivatives, unknown for paint, automotive fluids.
Refractory ceramic fibers (RCF's) (IARC 2002)	Monograph 81 (2002) Human: Inadequate Animal: Sufficient Overall: 2B	RCF's have replaced asbestos as high-temperature insulation. Exposure data indicate most current levels in production to be low, although peaks occur in maintenance work. About 32,000 workers estimated to be exposed in the United States in the 1980's.
Shiftwork that involves nightwork (Straif et al. 2007)	Monograph 98 (2007) Human: Limited Animal: Sufficient Overall: 2A	Approximately 5-20% of workers in developed countries; most common in health care, industrial manufacturing, mining, transport, communication, leisure and hospitality sectors
Styrene (IARC 2002) and Styrene-7,8-oxide (IARC 1994)	Monograph 82 (2002) Human: Limited Animal: Limited Overall: 2B Monograph 60 (1994) Human: Inadequate Animal: Sufficient Overall: 2A	Manufacturing of polystyrene and numerous copolymers and resins. Exposure in manufacture and fabrication, tobacco and marijuana smoke, wood burning, fuel combustion, product off-gassing, in food due to migration from packaging. In personal monitoring studies, indoor sources produced greater exposures than outdoor.

Tetrachloroethylene (PERC) (IARC 1995)	Monograph 63 (1995) Human: Limited Animal: Sufficient Overall: 2A	Dry-cleaning, cleaning solvents for metals, and chemical intermediates. Use (1998) in U.S., Europe, Japan: 345,000 tons.
Titanium dioxide	Monograph 93 (2006) Human: Inadequate Animal: Sufficient Overall: 2B	Manufacturing of TiO ₂ worldwide (>5 mill tons/year). Used in paints and pigment; plastics; paper; cosmetics, catalysts, ceramics, printing inks, roofing granules, glass, and welding fluxes. Use of TiO ₂ nanoparticles is growing (~2.5% in 2009 and anticipated increase to ~10% by 2015), especially in the cosmetics industry.
Trichloroethylene (TCE) (IARC 1995)	Monograph 63 (1995) Human: Limited Animal: Sufficient Overall: 2A	Degreasers, cleaning solvents for metals and fabrics, and chemical intermediates. Use (1998) in U.S., Europe, Japan: 318,000 tons.
Welding fumes (IARC 1990)	Monograph 49 (1990) Human: Limited Animal: Inadequate Overall: 2B	Welding fume compositions depend on welding process used and materials being welded. Stainless steel welding includes exposures to Ni-compounds and Cr(VI)-compounds, while mild steel welding does not; excess lung cancer has been observed with both types of welding. Occupational exposures to millions of welders worldwide as well as others working in welding environments.

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